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PATENT  
Docket No. 249,000,20101

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Applicant(s): Dominic E. Cosgrove ) Group Art Unit: 1641  
Serial No.: 09/970,318 ) Examiner: Bao Thuy L. Nguyen  
Confirmation No.: 1885 )  
Filed: October 3, 2001 )  
For: IMMUNODIAGNOSTIC DETERMINATION OF USHER SYNDROME  
TYPE IIA

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### INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents  
P.O. Box 2327  
Arlington, VA 22202

Sir:

In compliance with the duty imposed by 37 C.F.R. § 1.56, and in accordance with C.F.R. §§ 1.97 *et. seq.*, the materials enclosed herewith are brought to the attention of the Examiner as possibly being of interest in connection with the above-identified patent application. Consideration of each of the documents listed on the attached 1449 form(s) is respectfully requested. Pursuant to the provisions of M.P.E.P. §609, Applicant further requests that a copy of the 1449 forms, marked as being considered and initialed by the Examiner, be returned with the next Official Communication.

It is believed that no fee is due, as this Information Disclosure Statement is filed prior to the receipt of any Action on the merits. However, in the event a fee is due, please charge any fee or credit any overpayment to Account No. 13-4895.

**Information Disclosure Statement**

Page 2 of 2

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The Examiner is invited to contact Applicant's Representatives at the below-listed telephone number, if they can be of any assistance during prosecution of the present application.

**CERTIFICATE UNDER 37 C.F.R. 1.8:**

The undersigned hereby certifies that this paper is being deposited in the United States Postal Service, as first class mail, in an envelope addressed to: Assistant Commissioner for Patents, P.O. Box 2327, Arlington, VA 22202, on this 13 day of May, 2002.

  
Ann M. Muetling

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PATENT TRADEMARK OFFICE

May 13, 2002  
Date

By:

  
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<b>INFORMATION DISCLOSURE STATEMENT</b>	Atty. Docket No.: 249.00020101	Serial No.: 09/970,318
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	Filing Date: October 3, 2001	Group: 1641

## U.S. PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	none					

## FOREIGN PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Country	Class	Subclass	Translation	
						Yes	No
	none						

## OTHER DOCUMENTS (Including Authors, Title, Date, Pertinent Papers, etc.)

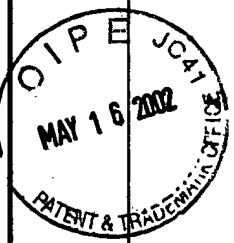
Examiner Initial	Document Description
	Adato et al., "Three novel mutations and twelve polymorphisms identified in the USH2A gene in Israeli USH2 families," <i>Hum Mutat. (Mutation in Brief)</i> ; published online for subscribers 2000 Mar 22 (6 pgs.).
	Adato et al., "Three novel mutations and twelve polymorphisms identified in the USH2A gene in Israeli USH2 families," <i>Hum Mutat.</i> 2000 Apr;15(4):abst. 388.
	Barkalow et al., "Localization of the major heparin-binding site in fibronectin," <i>J Biol Chem.</i> 1991 Apr 25;266(12):7812-8.
	Beck et al., "Structure and function of laminin: anatomy of a multidomain glycoprotein," <i>FASEB J.</i> 1990 Feb 1;4(2):148-60.
	Bork et al., "Structure and distribution of modules in extracellular proteins," <i>Q Rev Biophys.</i> 1996 May;29(2):119-67.
	Boughman et al., "Usher syndrome: definition and estimate of prevalence from two high-risk populations," <i>J Chronic Dis.</i> 1983;36(8):595-603.
	Bowditch et al., "Identification of a novel integrin binding site in fibronectin. Differential utilization by $\beta 3$ integrins," <i>J Biol Chem.</i> 1994 Apr 8;269(14):10856-63.

EXAMINER	Date Considered
<p>*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>	

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Examiner Initial	Document Description
	Brookhouser, Patrick E., "Center for Hearing Loss in Children," Grant Abstract, Grant Number 5P60DC000982-10 [online]. National Institutes of Health, National Institute on Deafness and other Disorders of Communication, project dates 1990-09-30 to 2001-08-31. Retrieved from the Internet 2002-03-21. URL: < <a href="http://commons.cit.nih.gov/crisp3/CRISP_LIB.getdoc?textkey=6055813&amp;p_grant_num=5P60DC000982-10&amp;p_query=&amp;ticket=388948&amp;p_audit_session_id=3084290&amp;p_keywords=&gt;">http://commons.cit.nih.gov/crisp3/CRISP_LIB.getdoc?textkey=6055813&amp;p_grant_num=5P60DC000982-10&amp;p_query=&amp;ticket=388948&amp;p_audit_session_id=3084290&amp;p_keywords=&gt;</a> >; 2 pages.
	Bruch et al., "Dissection of laminin by cathepsin G into its long-arm and short-arm structures and localization of regions involved in calcium dependent stabilization and self-association," <i>Eur J Biochem.</i> 1989 Nov 6;185(2):271-9.
	Colognato-Pyke et al., "Mapping of network-forming, heparin-binding, and $\alpha 1\beta 1$ integrin-recognition sites within the $\alpha$ -chain short arm of laminin-1," <i>J Biol Chem.</i> 1995 Apr 21;270(16):9398-406.
	Deiner et al., "Netrin-1 and DCC mediate axon guidance locally at the optic disc: loss of function leads to optic nerve hypoplasia," <i>Neuron.</i> 1997 Sep;19(3):575-89.
	Dreyer et al., "Identification of novel <i>USH2A</i> mutations: implications for the structure of <i>USH2A</i> protein," <i>Eur J Hum Genet.</i> 2000 Jul;8(7):500-6.
	Ehret, "Development of absolute auditory thresholds in the house mouse ( <i>Mus musculus</i> )," <i>J Am Audiol Soc.</i> 1976 Mar-Apr;1(5):179-84.
	Engel, "EGF-like domains in extracellular matrix proteins: localized signals for growth and differentiation?" <i>FEBS Lett.</i> 1989 Jul 17;251(1-2):1-7.
	Ettner et al., "The N-terminal globular domain of the laminin $\alpha 1$ chain binds to $\alpha 1\beta 1$ and $\alpha 2\beta 1$ integrins and to the heparan sulfate-containing domains of perlecan," <i>FEBS Lett.</i> 1998 Jul 3;430(3):217-21.
	Eudy et al., "Mutation of a gene encoding a protein with extracellular matrix motifs in Usher syndrome type IIa," <i>Science.</i> 1998 Jun 12;280(5370):1753-7.
	Hallgren, "Retinitis pigmentosa combined with congenital deafness; with vesibulo-cerebellar ataxia and mental abnormality in a proportion of cases," <i>Acta Psychiatrica et Neurologica Scandinavica Supplementum</i> , 1959;138(34):1-101.
	Hmani et al., "A novel locus for Usher syndrome type II, <i>USH2B</i> , maps to chromosome 3 at p23-24.2," <i>Eur J Hum Genet.</i> 1999 Apr;7(3):363-7.

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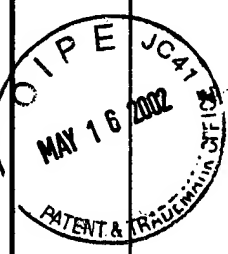
Examiner Initial	Document Description
	Kimberling et al., "Gene mapping of Usher syndrome type IIa: localization of the gene to a 2.1-cM segment on chromosome 1q41," <i>Am J Hum Genet.</i> 1995 Jan; 56(1):216-23.
	Leonardo et al., "Guidance of developing axons by netrin-1 and its receptors," <i>Cold Spring Harb Symp Quant Biol.</i> 1997;62:467-78.
	Lin, "Immunogold localization of extracellular matrix molecules in Bruch's membrane of the rat," <i>Curr Eye Res.</i> 1989 Nov;8(11):1171-8.
	Lindenov, <i>The Etiology of Deaf-mutism with Special Reference to Heredity</i> , Vol. 8 in series <i>Opera ex Domo Biologiae Hereditariae Humanae Universitatis Havniensis</i> ; Einar Munksgaard, Copenhagen, Denmark (1945) 6 pgs.
	Liu et al., "A mutation (2314delG) in the Usher syndrome type IIA gene: high prevalence and phenotypic variation," <i>Am J Hum Genet.</i> 1999 Apr;64(4):1221-5.
	Mattson et al., "A practical approach to crosslinking," <i>Mol Biol Rep.</i> 1993 Apr; 17(3):167-83.
	Mayer et al., "Low nidogen affinity of laminin-5 can be attributed to two serine residues in EGF-like motif $\gamma$ 2III4," <i>FEBS Lett.</i> 1995 May 29;365(2-3): 129-32.
	Métin et al., "A role for netrin-1 in the guidance of cortical efferents," <i>Development.</i> 1997 Dec;124(24):5063-74.
	National Center for Biotechnology Information, National Library of Medicine, National Institutes of Health, GenBank Locus AF055580, Accession No. AF055580, "Homo sapiens Usher syndrome type IIa protein (USH2A) mRNA, complete cds.," [online]. Bethesda, MD [retrieved on 2002-04-05]. Retrieved from the Internet: <URL:http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?query_key=2&db=nucleotide&page=0&dispmax=20&WebEnv=IEQSF%3EFJ%3FNIBNHg%3CB%3CCEcKAl%3E%3E%3F%3EfiICA%3CB%5D%3E%40%5CHJAKwCc%60I%3Ed%3C&WebEnvRq=1>; 4 pgs.
	National Center for Biotechnology Information, National Library of Medicine, National Institutes of Health, GenBank Locus HSUSH2A01, Accession No. AF091873, "Homo sapiens Usher syndrome type IIa protein gene, exons 1 and 2," [online]. Bethesda, MD [retrieved on 2002-04-05]. Retrieved from the Internet: <URL:http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?query_key=4&db=nucleotide&page=0&dispmax=20&WebEnv=Wg%3Cn_FDG%5DE%60%3E%3D%3Cc%5DPGDJc_gTB%5EjbFkl%3C_JEH%3Dzcc%3EF%5EfJdTI%3D%3F%3C&WebEnvRq=1>; 3 pgs.

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Examiner Initial	Document Description
	National Center for Biotechnology Information, National Library of Medicine, National Institutes of Health, GenBank Locus HSUSH2A17, Accession No. AF091889, "Homo sapiens Usher syndrome type IIa protein gene, exon 21 and complete cds," [online]. Bethesda, MD [retrieved on 2002-04-05]. Retrieved from the Internet: <URL: <a href="http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?query_key=6&amp;db=nucleotide&amp;page=0&amp;dispmax=20&amp;WebEnv=C%5B%60%3CIgCAA%5C%5Ee%3D%3FHCK%3CCDB%3CdIEjhCdbaiH%3F%40AARqjH%5EGe%5E%3EkDFH&amp;WebEnvRq=1">http://www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?query_key=6&amp;db=nucleotide&amp;page=0&amp;dispmax=20&amp;WebEnv=C%5B%60%3CIgCAA%5C%5Ee%3D%3FHCK%3CCDB%3CdIEjhCdbaiH%3F%40AARqjH%5EGe%5E%3EkDFH&amp;WebEnvRq=1</a> >; 3 pgs.
	Nuutila, "Dystrophia retinae pigmentosa-dysacusis syndrome (DRD): a study of the Usher- or Hallgren syndrome," <i>J Génét Hum.</i> 1970 May; 18(1):57-88.
	Pfaff et al., "Binding of purified collagen receptors ( $\alpha 1\beta 1$ , $\alpha 2\beta 1$ ) and RGD-dependent integrins to laminins and laminin fragments," <i>Eur J Biochem.</i> 1994 Nov 1;225(3):975-84.
	Pieke-Dahl et al., "Genetic heterogeneity of Usher syndrome type II: localisation to chromosome 5q," <i>J Med Genet.</i> 2000 Apr;37(4):256-62.
	Rivolta et al., "Missense mutation in the USH2A gene: association with recessive retinitis pigmentosa without hearing loss," <i>Am J Hum Genet.</i> 2000 Jun;66(6):1975-8.
	Poe et al., "Directed outgrowth from a subset of cochlear nucleus fibers in a collagen-gel matrix," <i>Brain Res Dev Brain Res.</i> 1998 Jan 14;105(1):153-7.
	Saus et al., "The complete primary structure of mouse $\alpha 2(IV)$ collagen. Alignment with mouse $\alpha 1(IV)$ collagen," <i>J Biol Chem.</i> 1989 Apr 15; 264(11):6318-24.
	Sayers et al., "Role for transforming growth factor- $\beta 1$ in Alport renal disease progression," <i>Kidney Int.</i> 1999 Nov;56(5):1662-73.
	Sharma et al., "Crystal structure of a heparin- and integrin-binding segment of human fibronectin," <i>EMBO J.</i> 1999 Mar 15;18(6):1468-79.
	Silletti et al., "Plasmin-sensitive dibasic sequences in the third fibronectin-like domain of L1-cell adhesion molecule (CAM) facilitate homomultimerization and concomitant integrin recruitment," <i>J Cell Biol.</i> 2000 Jun 26;149(7):1485-501.
	Sumegi et al., "The construction of a yeast artificial chromosome (YAC) contig in the vicinity of the Usher syndrome type IIa (USH2A) gene in 1q41," <i>Genomics.</i> 1996 Jul 1;35(1):79-86.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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		)		
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DOCUMENTS ACCOMPANYING  
INFORMATION DISCLOSURE STATEMENT  
FILED MAY 13, 2002

PART 1 OF 2



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PART 2 OF 2